Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-02-BEN** **North Fork Catoctin Creek**

Location: Begins at the confluence with an unnamed tributary to North Fork Catoctin Creek, approximately 0.15 rivermile downstream from the Route 287 bridge, and continues downstream until the confluence with Catoctin Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of four biological monitoring events in 2009 and 2010, one biological monitoring event in 2011, and one biological monitoring event in 2014 at station 1aNOC000.42 resulted in a VSCI score which indicates an impaired macroinvertebrate community

North Fork Catoctin Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.42**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* A02R-04-BEN** **North Fork Catoctin Creek**

Location: Begins at the confluence of an unnamed tributary to North Fork Catoctin Creek, approximately 0.75 rivermile upstream from Route 719 near Hillsboro, and continues downstream 2.45 rivermiles to an unnamed impoundment.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of four biological monitoring events in 2010, 2011, and 2014 at station 1aNOC009.37 resulted in a VSCI score which indicates an impaired macroinvertebrate community.

North Fork Catoctin Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.54**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* A03R-02-BAC** **Clarks Run**

Location: Begins at the confluence with an unnamed tributary to Clarks Run, at rivermile 5.4, and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

2014 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) from station 1aCLK002.40, at Route 658.

Clarks Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**5.46**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-01-BEN** **Wancopin Creek**

Location: Begins at the confluence with an unnamed tributary to Wancopin Creek, just upstream from Route 50, and continues downstream until the confluence with Goose Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2008 Assessment: Two biological monitoring events in 2002 at station 1aWAC003.31 (Route 50) both resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Wancopin Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.44**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A05R-02-BEN** **Jeffries Branch**

Location: Segment begins at the headwaters of Jeffries Branch and continues downstream until the confluence with an unnamed tributary at rivermile 1.43.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Eight biological monitoring events in 2010, 2011, 2013, and 2014 at station 1aJEE002.22, at Route 743, resulted in a VSCI score indicating an impaired macroinvertebrate community.

Jeffries Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.19**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A06R-01-BEN** **North Fork Goose Creek**

Location: Begins at the confluence with an unnamed tributary to North Fork Goose Creek, approximately 0.23 rivermile upstream from Route 725, and continues downstream until the confluence with Crooked Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: One biological monitoring event in 2008 at station 1aNOG005.69 (Route 722) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

North Fork Goose Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.69**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A07R-02-BEN** **North Fork Beaverdam Creek**

Location: Begins at the headwaters of North Fork Beaverdam Creek and continues downstream until the confluence with Butchers Branch.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2008 Assessment: One of two biological monitoring events in 2001 at station 1aNOB007.97 (Route 831) resulted in a VSCI score which indicates an impaired macroinvertebrate community, as does the mean score of these two samples.

North Fork Beaverdam Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.81**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-01-PCB** **Broad Run, Difficult Run, Goose Creek**

Location: Includes the following tributaries between the Virginia/Maryland state line near the Route 340 bridge (Loudoun County) to the I-395 bridge in Arlington County (above the Woodrow Wilson Bridge): Goose Creek up to the Dulles Greenway Road Bridge, Broad Run up to the Route 625 bridge, and Difficult Run up to the Route 7 bridge.

City / County: Fairfax Co. Loudoun Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 12/13/04, limits American eel consumption to no more than two meals per month.

Broad Run, Difficult Run, Goose Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**39.63**	**15.34**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-04-BEN** **Tuscarora Creek**

Location: Begins at the confluence with Town Branch and continues downstream until the confluence with Goose Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of 2 biological monitoring events in 2012 at station 1aTUS003.19 resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Tuscarora Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.89**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A08R-05-BEN** **Dry Mill Branch**

Location: Segment begins at the confluence with an unnamed tributary at rivermile 2.97 and continues downstream to the confluence with Tuscarora Creek.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of four biological monitoring events in 2013 and 2014 at station 1ADRL001.00 resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Dry Mill Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.97**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-01-BAC** **Unnamed tributary to the Potomac River**

Location: Begins at an unnamed tributary at rivermile 1.82, and continues downstream to the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

2014 Assessment: E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) from station 1aXLE001.62, at Algonkian Parkway.

Unnamed tributary to the Potomac River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**1.74**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-01-BEN** **Broad Run**

Location: Begins at the confluence with Horsepen Run and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2009 and two biological monitoring events in 2012 at station 1aBRB002.15, at Route 7, and two biological monitoring events in 2009 and two biological monitoring events in 2012 at station 1aBRB006.97 (upstream from Waxpool Road) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Broad Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**8.42**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-01-HG** **Broad Run**

Location: Begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Mercury in Fish Tissue / 5A

2010 Assessment: Excursions above the water quality criterion based tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in two species of fish; smallmouth bass (2004) and yellow bullhead catfish (2004) at monitoring station 1aBRB002.15.

Broad Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:			**2.93**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-02-BAC** **Broad Run**

Location: Begins at the confluence with Horsepen Run, and continues downstream until the confluence with Cabin Branch, at rivermile 5.35. Also, begins at the confluence with Beaverdam Run and continues downstream until the confluence with the Potomac River.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) from station 1aBRB006.33, at Route 625 (Waxpool Rd), and E. coli bacteria criterion excursions (7 of 40 samples - 17.5%) from station 1aBRB002.15, at Route 7.

Broad Run		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation				
	Escherichia coli - Total Impaired Size by Water Type:			**6.15**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-02-BEN** **Broad Run**

Location: Begins at the confluence with Lenah Run and continues downstream until the confluence with South Fork Broad Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring event in 2009 and two biological events in 2012 at station 1aBRB015.43, upstream of Route 621, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Broad Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.42**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-03-BAC** **Broad Run**

Location: Begins at the confluence with Lenah Run and continues downstream until the confluence with South Fork Broad Run.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (6 of 23 samples - 26.1%) from station 1aBRB015.38, at Route 621.

Broad Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.42**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-03-BEN** **Horsepen Run**

Location: Segment begins at the headwaters of Horsepen Run and continues until the confluence with an unnamed tributary to Horsepen Run, approx. 1.0 rivermile downstream from Route 28.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of six biological monitoring events in 2010, 2013, and 2014 at station 1aHPR003.93 resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Horsepen Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**8.17**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-04-BAC** **South Fork Broad Run**

Location: Begins at the headwaters of South Fork Broad Run and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) from station 1aSOR000.59, at Route 621.

South Fork Broad Run		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation				
	Escherichia coli - Total Impaired Size by Water Type:			**5.28**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-04-BEN** **South Fork Broad Run**

Location: Begins at the headwaters of South Fork Broad Run and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of four biological monitoring events in 2011 and 2012 at station 1aSOR000.59 resulted in a VSCI score which indicates an impaired macroinvertebrate community.

South Fork Broad Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.28**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-05-BAC** **Beaverdam Run**

Location: Begins at the confluence with of an unnamed tributary to Beaverdam Run, in Ashburn Park, and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (3 of 12 samples - 26.0%) from station 1aBEM000.60, at Route 607.

Beaverdam Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.85**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-05-BEN** **Beaverdam Run**

Location: Begins at the confluence with of an unnamed tributary to Beaverdam Run, in Ashburn Park, and continues downstream until the confluence with Broad Run.

City / County: Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of four biological monitoring events in 2013 and 2014 at station 1ABEM000.60 resulted in a VSCI score which indicates an impaired macroinvertebrate community

Beaverdam Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.85**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-06-BAC** **Indian Creek**

Location: Begins at the headwaters of Indian Run and continues downstream to the confluence with Horsepen Run.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (5 of 15 samples - 33.3%) from station 1aINI000.80, at Route 606 (Old Ox Road).

Indian Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.48**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A09R-07-BAC** **Horsepen Run**

Location: Segment begins at the headwaters of Horsepen Run and continues until the confluence with an unnamed tributary to Horsepen Run, approx. 1.0 rivermile downstream from Route 28.

City / County: Loudoun Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (2 of 17 samples - 11.8%) from station 1AHPR003.87 at Dulles Airport Access Road.

Horsepen Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.17**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A10R-01-BEN** **Sugarland Run**

Location: Begins at the confluence with Smilax Branch and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co. Loudoun Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

A total of four biological events in 2009 and in 2010 at station 1aSUG006.28 at Wiehle Avenue and two biological monitoring events in 2010 at station 1aSUG003.52 resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Sugarland Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.71**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-01-HEPOXID Difficult Run**

Location: Begins at the confluence with Captain Hickory Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Heptachlor epoxide / 5A

2008 Assessment: Excursions above of the water quality criterion based tissue screening value (TV) of 12 parts per billion (ppb) for heptachlor epoxide in fish tissue were recorded in one species of fish samples (2 total samples) in American eel (2001 and 2004), collected at monitoring station 1aDIF000.86.

Difficult Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Heptachlor epoxide - Total Impaired Size by Water Type:			**3.17**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-02-BEN** **Captain Hickory Run**

Location: Begins at the headwaters of Captain Hickory Run and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2008 Assessment: Two biological monitoring events in 2001 at station 1aCAH001.82 (upstream from Route 681) both resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Captain Hickory Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.27**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-03-BEN** **Difficult Run**

Location: Begins at confluence with Rocky Branch, approximately 0.25 rivermile upstream of Route 672, and continues downstream until the confluence with Wolftrap Creek.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at station 1aDIF005.06 (Route 675) and two biological monitoring events in 2007 at station 1aDIF010.48 (Route 672) resulted in VSCI scores indicating an impaired macroinvertebrate community.

Difficult Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.37**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-04-BEN** **Colvin Run**

Location: Begins at the headwaters of Colvin Run and continues downstream until the confluence with an unnamed tributary (streamcode XJJ) flowing from Lake Anne.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at station 1aCOV003.32 (Wiehle Ave) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Colvin Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.09**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-05-BEN** **Snakeden Branch**

Location: Begins at the confluence with an unnamed tributary to Snakeden Branch, approximately 0.4 rivermile downstream from the Twin Branches Road bridge, and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at station 1aSNA000.21, at Route 677 (Hunter Station Road) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Snakeden Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.97**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-06-BEN** **Little Difficult Run**

Location: Segment begins at the confluence with South Fork Little Difficult Run and continues downstream until the confluence with Difficult Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at station 1aLID000.64, at Route 669, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Little Difficult Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.75**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-07-BEN** **Old Courthouse Spring Branch**

Location: Begins at the headwaters of Old Courthouse Spring Branch and continues downstream until the confluence with Wolftrap Creek.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at station 1aOCS000.43, at Laurel Hill Rd, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Old Courthouse Spring Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.11**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-08-BAC** **Nichols Run**

Location: Begins at the headwaters of Nichols Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) from station 1aNIC002.10, at Route 603.

Nichols Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.56**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-08-BEN** **Turkey Run**

Location: Begins at the headwaters of Turkey Run, near Langley High School, and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2009 at station 1aTUY000.26, upstream of the G.W. Parkway, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Turkey Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.34**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A11R-09-BEN** **Dead Run**

Location: Begins at the headwaters of Dead Run and continues downstream until the confluence with the Potomac River.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2009 at station 1aDED000.29, upstream of G.W. Parkway, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Dead Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.82**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A12E-01-CDANE** **Four Mile Run**

Location: Includes the tidal waters of Four Mile Run; from rivermile 1.46 downstream until the confluence with the Potomac River, at the state line.

City / County: Alexandria City Arlington Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Chlordane / 5A

Excursions above the water quality criterion based fish tissue value (TV) of 110 parts per billion (ppb) for total chlordane in fish tissue were recorded in 2 species (carp and channel catfish) of fish (3 total samples) in 2008 at monitoring station 1aFOU000.45.

Four Mile Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Chlordane - Total Impaired Size by Water Type:	**0.050**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-01-BEN** **Pimmit Run**

Location: Begins at the Route 309 bridge crossing and continues downstream until the confluence with Little Pimmit Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2009 and two biological monitoring events in 2011 at station 1aPIM001.89 at Ranleigh Road, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Pimmit Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.76**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A12R-03-CDANE** **Pimmit Run**

Location: Begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.

City / County: Arlington Co. Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Chlordane / 5A

2008 Assessment: Excursions above the water quality criterion based tissue value (TV) of 310 ppb for chlordane in fish tissue were recorded in tissue from one species (American eel) of fish sampled in 2001 and 2004 at monitoring station 1aPIM000.15.

Pimmit Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Chlordane - Total Impaired Size by Water Type:			**1.64**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

Cause Group Code: A12R-03-HEPOXID **Pimmit Run**

Location: Begins at the confluence with Little Pimmit Run and continues downstream until the confluence with the Potomac River.

City / County: Arlington Co. Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Heptachlor epoxide / 5A

2010 Assessment: Excursions above the water quality criterion based tissue value (TV) of 4.4 parts per billion (ppb) for heptachlor epoxide in fish tissue were recorded in two species of fish samples (3 total samples); American eel (2004, 2004) and white sucker (2004) at monitoring station 1aPIM000.15.

Pimmit Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Heptachlor epoxide - Total Impaired Size by Water Type:			**1.64**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-01-PCB** **Indian Run**

Location: Includes the entire portion of Indian Run, from the headwaters until the confluence with Backlick Run.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 7/27/05, limits consumption of creek chub to no more than two meals per month.

Indian Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**3.18**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-03-BEN** **Holmes Run**

Location: Begins at the headwaters of Holmes Run and continues downstream until the start of Lake Barcroft.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2010 at station 1aHOR005.48, upstream of Route 613, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Holmes Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.09**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A13R-04-BEN** **Tripps Run**

Location: Begins at the headwaters of Tripps Run and continues downstream until the start of Lake Barcroft.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2010 at station 1aTRI001.50, upstream of Route 613, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Tripps Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.70**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-01-BAC** **Paul Springs Branch**

Location: Begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

2014 Assessment: E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at station 1aPAU001.17, at Route 626.

Paul Springs Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.38**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-01-BEN** **Paul Springs Branch**

Location: Begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at station 1aPAU001.17 (Route 626) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Paul Springs Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.38**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-01-DO** **Paul Springs Branch**

Location: Begins at the headwaters of Paul Spring Branch and continues downstream until the confluence with North Branch.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5A

Excursions below the minimum dissolved oxygen criterion (6 of 42 samples - 14.3%%) were recorded at USGS station 01653717, downstream of Sherwood Hall Lane.

Paul Springs Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.38**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A14R-02-BAC** **Dogue Creek**

Location: Begins at the confluence with an unnamed tributary to Dogue Creek, approximately 0.3 rivermiles upstream from Rt. 622, and continues downstream until the end of the free-flowing waters of Dogue Creek.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) at station 1aDOU003.17, at Route 622.

Dogue Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**1.41**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15E-01-PH** **Pohick Bay**

Location: Segment includes tidal waters of Pohick Creek, from the boundary of watershed A15, and extends until rivermile 1.31 in Gunston Cove.
Portion of CBP segment POTTF.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

Sufficient excursions above the upper limit of the pH criterion range at station 1aPOH002.10 at the end of the dock at Pohick Regional Park (36 of 210 observations - 17.1%).

Pohick Bay **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.619**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15L-01-HG** **Lake Accotink**

Location: Includes all of Lake Accotink.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Mercury in Fish Tissue / 5A

2014 Assessment: Excursions above the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury in fish tissue were recorded in two species of fish (3 total samples): largemouth bass (2007, 2007) and bluegill sunfish (2007) collected at monitoring station 1aACO012.78.

Lake Accotink **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**73.93**	

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15L-01-PCB** **Lake Accotink**

Location: Includes all of Lake Accotink.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

2014 Assessment: Excursions above the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in two species of fish (3 total samples): carp (2007, 2007) and gizzard shad (2007) collected at monitoring station 1aACO012.78.

Lake Accotink **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**73.93**	

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-01-BEN** **Accotink Creek**

Location: Begins at the outlet of Lake Accotink and continues downstream until the tidal waters of Accotink Bay.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at station 1aACO002.50, at Route 1; two biological monitoring events in 2007 and two biological monitoring events in 2008 at station 1aACO006.10, at Route 790; and two biological monitoring events in 2008 at station 1aACO009.14, at Routes 636 and 286, all resulted in VSCI scores which indicate an impaired macroinvertebrate community.

Accotink Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.09**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-01-CHLR** **Accotink Creek**

Location: Begins at the confluence with Crook Branch, upstream from Route 846, and continues downstream until the start of Lake Accotink.

City / County: Fairfax Co.

Use(s): Aquatic Life Wildlife

Cause(s) / VA Category: Chloride / 5A

Three exceedances of the acute water quality criterion were recorded at station 1AACO-1654000-MD within a three-year period.

Accotink Creek		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	Chloride - Total Impaired Size by Water Type:			**5.22**

Accotink Creek		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Wildlife				
	Chloride - Total Impaired Size by Water Type:			**5.22**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-01-PCB** **Accotink Creek**

Location: Segment begins at the outlet of Lake Accotink and continues downstream until the tidal waters of Accotink Bay.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

2010 Assessment: Excursions above the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in three species of fish (3 total samples): American eel (2004), redbreast sunfish (2004), and rainbow trout (2004) collected at monitoring station 1aACO004.86 (2010 Assessment). 2014 Assessment: Excursions for PCBs in fish tissue recorded in one species (American eel) of fish sampled (1 total excursion) at station 1aACO011.62 and in one species (yellow bullhead catfish) of fish sampled (1 total excursion) at station 1aACO012.58, in 2008.

Accotink Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**10.09**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-04-BEN** **Accotink Creek**

Location: Begins at the headwaters of Accotink Creek and continues downstream until the start of Lake Accotink.

City / County: Fairfax City Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: EPA biological monitoring events in 2005 and 2006, and two biological monitoring events in 2007 at station 1aACO014.57, at Route 620, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Accotink Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.59**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A15R-05-BEN** **Long Branch**

Location: Begins at the confluence with an unnamed tributary to Long Branch, at the Route 651 (Guinea Road) bridge, and continues downstream until the confluence with Accotink Creek, just below Braddock Road.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2012 Assessment: Two biological monitoring events in 2006 at station 1aLOE001.99 (downstream from Route 651/Guinea Road) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Long Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.37**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A16E-01-BZOKFL** **Pohick Creek**

Location: Includes tidal waters of Pohick Creek upstream from the boundary of watershed A16.

City / County: Fairfax Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Benzo[k]fluoranthene / 5A

2002 Assessment: Excursions above the water quality criterion based tissue value (TV) of 5.5 ppb for benzo(k) fluoranthene in fish tissue (bullhead catfish, white perch, and sunfish) at station 1aPOH003.56 in 1996.

Pohick Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Benzo[k]fluoranthene - Total Impaired Size by Water Type:	**0.292**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-01-BAC** **Pohick Creek**

Location: Begins at the confluence with South Run, approximately 0.25 rivermile upstream from I-95, and continues downstream until the end of the free-flowing portion of Pohick Creek.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (15 of 40 samples - 37.5%) from station 1aPOH005.36, at Route 1.

Pohick Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.78**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-01-BEN** **Pohick Creek**

Location: Begins at the confluence with Middle Run and continues downstream to the confluence with South Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2011 at station 1aPOH008.54, upstream of Route 641, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Pohick Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.61**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-02-BAC** **Pohick Creek**

Location: Begins at the confluence with Sideburn Branch and continues downstream until the confluence with South Run.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (6 of 12 samples - 50.0%) from station 1aPOH015.09, at Route 645; excursions (7 of 23 samples - 30.4%)from station 1aPOH013.12, at Route 644; and excursions (7 of 12 samples - 58.3%) from station 1APOH007.65, at Route 641.

Pohick Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.79**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-03-BAC** **South Run**

Location: Begins at the confluence with an unnamed tributary, at rivermile 3.6, and continues downstream to the confluence with Pohick Creek.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) from station 1ASOH001.71, at Route 6070.

South Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.16**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A16R-04-BAC** **Middle Run**

Location: Begins at the confluence of Cherry Run and Peyton Run, creating Middle Run, and continues downstream to the confluence with Pohick Creek.

City / County: Fairfax City Fairfax Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) from station 1AMID000.75, at Route 640.

Middle Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**2.85**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A18R-02-BEN** **Lucky Run**

Location: Begins at the headwaters of Lucky Run and continues downstream until the confluence with Cedar Run.

City / County: Prince William Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2008 Assessment: Two biological monitoring events in 2001 at station 1aLUC000.95, off Route 611, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Lucky Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.48**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-01-BEN** **Catharpin Creek**

Location: Begins at the Route 601 crossing and continues downstream until the confluence with Little Bull Run.

City / County: Prince William Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2009 at station 1aCAA001.18, at Route 676, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Catharpin Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.80**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-01-PCB** **Bull Run**

Location: Includes Bull Run near Manassas Park from the I-66 bridge downstream approximately fourteen miles to the Route 612 (Yates Ford Road) bridge.

City / County: Fairfax Co. Manassas Park City Prince William Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 12/13/04 and modified 07/27/05, limits consumption of carp and channel catfish to no more than two meals per month.

Bull Run **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:		**63.12**	**11.53**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A21R-02-BEN** **Bull Run**

Location: Begins at the confluence with Chestnut Lick, approximately 0.7 rivermile upstream from Route 705, and continues downstream until the confluence with an unnamed tributary to Bull Run, at rivermile 22.34.

City / County: Loudoun Co. Prince William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2014 at station 1ABUL025.94, at Route 705, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Bull Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.66**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-01-BEN** **Flatlick Branch**

Location: Begins at the confluence with Frog Branch and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2008 Assessment: Two biological monitoring events in 2001 at station 1aFLL000.62 (downstream of Route 620) resulted in a VSCI score indicating an impaired macroinvertebrate community.

Flatlick Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.22**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-02-BEN** **Big Rocky Run**

Location: Begins at the confluence with an unnamed tributary to Big Rocky Run, at approximately rivermile 4.03, and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007, at station 1aBIR003.02 (Route 657), resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Big Rocky Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.34**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-03-BEN** **Cub Run**

Location: Begins at the confluence with an unnamed tributary to Cub Run at rivermile 13.23 and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2009 and one biological monitoring event in 2010 at station 1aCUB004.63, upstream of Route 28, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Cub Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**13.23**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A22R-04-BEN** **Elklick Run**

Location: Begins at the confluence with an unnamed tributary to Elklick Run, approximately 0.65 rivermile downstream from the Route 620 crossing, and continues downstream until the confluence with Cub Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2012 at station 1aELC001.39, at Route 609, resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Elklick Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.27**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A23R-03-BEN** **Little Rocky Run**

Location: Begins at the confluence with Willow Springs and continues downstream until the confluence with Bull Run.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007, at station 1aLIP001.00, at Route 658 (Compton Road), resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Little Rocky Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.23**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A24R-01-BAC** **Wolf Run**

Location: Begins at the confluence with Maple Branch and continues downstream until the end of the free-flowing waters at the inundated waters of the Occoquan Reservoir.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (5 of 23 samples - 21.7%) from station 1aWOL001.26, at Route 643.

Wolf Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.50**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A24R-02-BAC** **Sandy Run**

Location: Begins at the headwaters of Sandy Run and continues downstream until the end of the free-flowing waters at the inundated waters of the Occoquan Reservoir.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) from station 1aSAD001.76, at Cathedral Forest Drive.

Sandy Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.08**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A24R-03-BAC** **Hooes Run**

Location: Begins at the outlet from Lake Omiscol and continues downstream until the beginning of the inundated waters of the Occoquan Reservoir.

City / County: Prince William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (6 of 20 samples - 30.0%) from station 1aHOO000.34, at Route 641 (Old Bridge Road).

Hooes Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**0.98**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-02-BAC** **Neabsco Creek**

Location: Segment includes the tidal waters of Neabsco Bay, beginning at rivermile 1.37, downstream until the confluence with Occoquan Bay.

City / County: Prince William Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (6 of 51 samples - 11.8%) from station 1aNEA000.57.

Neabsco Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:	**0.545**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-03-BAC** **Occoquan River**

Location: Extends from the end of the free-flowing waters to 0.5 rivermile downstream of monitoring station 1aOCC006.64.

City / County: Fairfax Co. Prince William Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (3 of 18 samples - 16.7%) combined from stations 1aOCC006.47, upstream of the Occoquan Regional Park boat ramp, and 1aOCC006.71, at the Route 123 (Gordon Boulevard).

Occoquan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:	**0.074**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-04-BAC** **Marumsco Creek**

Location: Includes all the tidal waters of Marumsco Creek from the end of the free-flowing stream to the open Occoquan Bay.

City / County: Prince William Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (5 of 23 samples - 21.7%) from station 1aMAU001.16, at Featherstone Drive.

Marumsco Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:	**0.025**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25E-04-EBEN** **Occoquan River**

Location: Extends 0.5 mile around Coastal 2000 monitoring station 1aOCC002.62.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Estuarine Bioassessments / 5A

2008 Assessment: Coastal 2000 weight of evidence analysis, utilizing bulk chemical data, toxicity test data, and an evaluation of benthic community conditions, resulted in an impaired determination for the aquatic life use. Results from the estuarine bioassessment, from station 1aOCC002.62, were the primary factor for this determination.

Occoquan River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**0.286**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-01-BEN** **Giles Run**

Location: Begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.

City / County: Fairfax Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2010 at station 1aGIL003.10, at Route 642 (Lorton Road), resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Giles Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**6.48**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-02-BAC** **Mills Branch**

Location: Begins at the headwaters of Mills Branch and continues downstream until the confluence with the Occoquan River.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) from station 1aWLB000.06, at Occoquan Regional Park.

Mills Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.72**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-03-BAC** **Giles Run**

Location: Begins at the headwaters of Giles Run and continues downstream until the end of the free-flowing waters of Giles Run, at Massey Creek.

City / County: Fairfax Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) from station 1aGIL000.85, at Route 1 (Jefferson Davis Highway).

Giles Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**6.48**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-04-BAC** **Marumsco Creek**

Location: Begins at the confluence with an unnamed tributary to Marumsco Creek, just upstream from Easy Street, and continues downstream until the end of the free-flowing waters.

City / County: Prince William Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (5 of 11 samples - 45.5%) from station 1aMAU001.67, at Route 1 (Jefferson Davis Highway).

Marumsco Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.53**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A25R-05-BAC** **Unnamed Tributary to Occoquan River**

Location: Begins at the headwaters of an unnamed tributary and continues downstream until the confluence with the Occoquan River.

City / County: Fairfax Co. Prince William Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) from station 1AXMK000.37, at Route 2100.

Unnamed Tributary to Occoquan River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**1.11**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A26E-01-BZOKFL Powells Creek**

Location: Extends to a 0.5 mile radius around the ACB station 1aPOW-765-ALL.

City / County: Prince William Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Benzo[k]fluoranthene / 5A

2002 Assessment: Excursions above the water quality criterion based tissue value (TV) of 5.5 ppb for benzo(k) fluoranthene in fish tissue (largemouth bass and sunfish) at station 1aPOW001.20 in 1996.

Powells Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption			
Benzo[k]fluoranthene - Total Impaired Size by Water Type:	**0.402**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A26E-03-EBEN** **Quantico Creek**

Location: Extends to a 0.5-mile radius around station 1aQUA001.09.

City / County: Prince William Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Estuarine Bioassessments / 5A

2008 Assessment: Impairment based on the Coastal 2000 weight of evidence analysis in 2001 at station 1aQUA001.09, utilizing bulk chemical data, toxicity test data, and an evaluation of benthic community conditions. Conclusions noted that organic enrichment, as well as chemical contamination, may be responsible for the impairment. The survey revealed low diversity of benthic faunal taxa.

Quantico Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**0.419**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A26E-03-EBTOX Quantico Creek**

Location: Extends to a 0.5-mile radius around station 1aQUA001.09.

City / County: Prince William Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Sediment Bioassays for Estuarine and Marine Water / 5A

2008 Assessment: Impairment based on the Coastal 2000 weight of evidence analysis in 2001 at station 1aQUA001.09, utilizing bulk chemical data, toxicity test data, and an evaluation of benthic community conditions. Conclusions noted that organic enrichment, as well as chemical contamination, may be responsible for the impairment. The acute bioassay revealed slight, yet significant, toxicity.

Quantico Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Sediment Bioassays for Estuarine and Marine Water - Total Impaired Size by Water Type:	**0.419**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A26L-01-HG** **Lake Montclair**

Location: Includes all of Lake Montclair.

City / County: Prince William Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: Mercury in Fish Tissue / 5A

2012 Assessment: Excursions above the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury in fish tissue were recorded in three species of fish (9 total samples): largemouth bass (2006), channel catfish (2006) and black crappie (2006) collected at monitoring station 1aPOW009.08.

Lake Montclair **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:		**103.54**	

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A26R-02-PH** **Unnamed tributary to Potomac River**

Location: Begins at the headwaters of the unnamed tributary and continues downstream until its confluence with the Potomac River

City / County: Stafford Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

Excursions below the lower limit of the pH criterion range (4 of 12 samples - 33.3%) at station 1aXLF000.13, at Route 633 (Arkendale Road).

Unnamed tributary to Potomac River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**3.67**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A27R-01-BAC** **Aquia Creek**

Location: Begins at the confluence with Cannon Creek, approximately 0.1 rivermile downstream from Route 610, and continues downstream until Smith Lake (Aquia Reservoir).

City / County: Stafford Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (4 of 32 samples - 12.5%) at station 1aAUA014.51, at the Route 641.

Aquia Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.36**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A27R-01-DO** **Unnamed tributary to Aquia Creek**

Location: Begins at the headwaters of the unnamed tributary and continues downstream until its confluence with Aquia Creek.

City / County: Stafford Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5A

Excursions below the minimum dissolved oxygen criterion (4 of 16 samples - 25.0%) at station 1aXLN-SCVDOT-ALL.

Unnamed tributary to Aquia Creek		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.25**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A27R-02-BAC** **Aquia Creek**

Location: Begins at the headwaters of Aquia Creek and continues downstream until the confluence with Cannon Creek, approximately 0.1 rivermile downstream from Route 610.

City / County: Fauquier Co. Stafford Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

E. coli bacteria criterion excursions (2 of 10 samples - 20.0%) from station 1aAUA023.09, at Route 644.

Aquia Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**8.81**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A29E-01-PH** **Potomac Creek**

Location: Segment extends from rivermile 1.91 until rivermile 1.09 along Potomac Creek and includes the lower portion of the Accokeek Creek arm of Potomac Creek, approximately 0.35 rivermile upstream.

City / County: King George Co. Stafford Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

2014 Assessment: Sufficient excursions above the upper limit of the pH criterion range were recorded at the continuous monitoring station 1aPOM-000.97-VIMS (69 of 606 observations, 11.4%).

Potomac Creek **Aquatic Life**		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
	pH - Total Impaired Size by Water Type:	**0.587**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A29E-02-BAC** **Fairview Beach (Potomac River)**

Location: Includes all of Fairview Beach on the Potomac River.

City / County: King George Co.

Use(s): Recreation

Cause(s) /
VA Category: Enterococcus / 5R

Sufficient excursions from the geometric mean enterococci criterion (12 of 18 samples) were recorded at the Virginia Department of Health station (VA351214) at Fairview Beach. VDH issued a total of 22 new and/or continued public beach closure advisories for Fairview Beach from 2009 to 2014. These advisories were based on the results of enterococci bacteria sampling at station VA351214 at Fairview Beach.

Fairview Beach (Potomac River)	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Enterococcus - Total Impaired Size by Water Type:	**0.005**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A29E-03-BAC** **Chotank Creek**

Location: Includes the tidal portion of Chotank Creek, from its headwaters until the fire road crossing inside of Caledon State Park.

City / County: King George Co.

Use(s): Recreation

Cause(s) /
VA Category: Enterococcus / 5A

Enterococci bacteria criterion excursions (3 of 12 samples - 25.0%) at station (1aCHN002.97) at the fire road in Caledon State Park.

Chotank Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.054**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-01-BEN** **Unnamed tributary to Long Branch**

Location: Begins at the headwaters of an unnamed tributary to Long Branch and continues downstream until the confluence with Long Branch, at rivermile 3.58.

City / County: Stafford Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

Two biological monitoring events in 2014 at station 1AXLB000.05 (0.05 mile upstream of confluence with Long Branch) resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Unnamed tributary to Long Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.30**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A29R-03-DO** **Potomac Run**

Location: Begins at the headwaters of Potomac Run and continues downstream until the confluence with Long Branch.

City / County: Stafford Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5A

Excursions below the minimum dissolved oxygen criterion (2 of 18 samples - 11.1%) were recorded at station 1aPOR000.40, at Route 648.

Potomac Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			**6.59**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-01-DO** **Pepper Mill Creek**

Location: Begins at the headwaters of Pepper Mill Creek and continues downstream until its confluence with Upper Machodoc Creek.

City / County: King George Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

2014 Assessment: Excursions below the minimum dissolved oxygen criterion (2 of 14 samples - 14.3%) at station 1aPEP001.58, at Route 206.

Pepper Mill Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Oxygen, Dissolved - Total Impaired Size by Water Type:			**8.66**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-01-PH** **Pepper Mill Creek**

Location: Begins at the headwaters of Pepper Mill Creek and continues downstream until its confluence with Upper Machodoc Creek.

City / County: King George Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

2014 Assessment: Excursions below the lower limit of the pH criterion range (3 of 14 samples - 21.4%) at station 1aPEP001.58, at Route 206.

Pepper Mill Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**8.66**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-02-DO** **Gambo Creek**

Location: Begins at the confluence with an unnamed tributary to Gambo Creek, approximately 0.35 rivermile upstream from Route 645, and continues downstream until the ponded waters on Gambo Creek.

City / County: King George Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

Excursions below the minimum dissolved oxygen criterion (4 of 5 samples - 80.0%) at station 1AGAM003.83, at Route 635.

Gambo Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**0.50**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A30R-02-PH** **Gambo Creek**

Location: Begins at the confluence with an unnamed tributary to Gambo Creek, approximately 0.35 rivermile upstream from Route 645, and continues downstream until the ponded waters on Gambo Creek.

City / County: King George Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

Excursions below the lower limit of the pH criterion range (2 of 5 samples - 40.0%) at station 1aGAM003.83, at Route 635.
Excursions below the lower limit of the pH criterion range (3 of 9 samples - 33.3%) at station 1aGAM003.50, at Route 301.

Gambo Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:	**0.177**		**0.50**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-01-BAC** **Rosier Creek**

Location: The portion of VDH Shellfish Condemnation 001-088A 9/17/2014 which was not included in the Rosier Creek Shellfish TMDL.

City / County: Westmoreland Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 5A

During the 2010 cycle, the portion of Rosier Creek around station 1AROS001.05, which is located off of the Route 205 boat ramp, was assessed as impaired of the Recreation Use due to an enterococci violation rate of 3/12.

Rosier Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.274**		

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A31E-11-BAC** **Bridges Creek**

Location: The tidal portion of Bridges Creek

City / County: Westmoreland Co.

Use(s): Recreation

Cause(s) /
VA Category: Enterococcus / 5A

Bridges Creek was assessed as not supporting of the Recreation Use support goal during the 2004 cycle based on a fecal coliform violation rate of 2/2 at 01660860, a USGS station located near the mouth of Bridges Creek.

The impairment converted to enterococci during the 2012 cycle based on violations at 1ABRG000.15.

The enterococci exceedance rate was 26/35 during the 2016 cycle.

Bridges Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.182**		

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* A31R-01-BAC** **Pine Hill Creek Watershed**

Location: Pine Hill Creek watershed from its headwaters to tidal limit at Rosier Creek.

City / County: King George Co. Westmoreland Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

During the 2014 cycle, the Pine Hill Creek watershed was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at 1APIN007.24, which is located at Route 301.

Note: monitoring at station 1APIN000.57 is acceptable (1/12).

Pine Hill Creek Watershed **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**34.91**

Sources:

Non-Point Source

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* A32E-09-EBEN** **Lower Machodoc Creek**

Location: One-half mile upstream and downstream of monitoring station 1ALOW002.18

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Estuarine Bioassessments / 5A

During the 2016 cycle, a portion of Lower Machodoc Creek was assessed as impaired of the Aquatic Life Use. Estuarine probabilistic monitoring at station 1ALOW002.18 in 2013 indicated a high potential for chronic benthic alteration due to PAHs in sediment.

Lower Machodoc Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Estuarine Bioassessments - Total Impaired Size by Water Type:	**0.687**		

Sources:

Contaminated Sediments Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-01-DO** **Thompson Branch**

Location: Thompson Branch from its headwaters to the tidal limit.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

Thompson Branch was initially assessed as not supporting the Aquatic Life Use during the 2006 cycle based on dissolved oxygen exceedances at Route 626 (1ATHP001.15), as well as DO exceedances at special study stations in the creek (1/1).

During the 2014 cycle, the segment remained impaired with a DO violation rate of 2/12.

Thompson Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.60**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-01-PH** **Thompson Branch**

Location: Thompson Branch from its headwaters to the tidal limit.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

Thompson Branch was initially assessed as not supporting the Aquatic Life Use during the 2006 cycle based on pH exceedances at Route 626 (1ATHP001.15), as well as pH exceedances at special study stations in the creek (1/1).

During the 2014 cycle, the segment remained impaired with a pH violation rate of 10/12.

Thompson Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**1.60**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-03-PH** **XLK - Nomini Creek, UT**

Location: The unnamed tributary in its entirety.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2010 cycle, the stream was assessed as not supporting the Aquatic Life Use due to a pH exceedance rate of 2/2 at probabilistic monitoring station 1AXLK000.04.

The impairment was confirmed during the 2016 cycle with an exceedance rate of 2/11.

XLK - Nomini Creek, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**1.45**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-05-PH** **Tavern Run**

Location: Tavern Run from its headwaters to the confluence with Newtons Mill Run.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2012 cycle, Tavern Run was impaired of the Aquatic Life Use due to pH violations at 1ATAE002.50, which is located at the Route 615 bridge.

Additional monitoring occurred in the 2014 cycle; the impairment was confirmed with exceedance rates of 3/24 at 1ATAE002.50 and 3/12 at 1ATAE003.85.

Tavern Run		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	pH - Total Impaired Size by Water Type:			**3.27**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-06-PH** **Nontidal Nomini Creek Tributaries**

Location: Multiple tributaries throughout the upper Nomini Creek watershed - including Nomini Creek, Marshall Creek, Buena Vista Branch, Oldham Creek, Newtons Mill Run, Antioch Branch, Templeman Run.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2014 cycle, monitoring occurred throughout the upper Nomini Creek watershed. Multiple tributaries indicated low pH - including Nomini Creek, Marshall Creek, Buena Vista Branch, Oldham Creek, Newtons Mill Run, Antioch Branch, and Templeman Run.

4/5 at 1AANT001.31
3/12 at 1ABUV000.15
2/12 at 1AMAR000.62
2/12 at 1ANET001.77
2/12 at 1AOLD000.70
3/12 at 1ATEM003.54
2/12 at 1ANOM012.38

Note; Nomini Creek, UT (XLK) and Tavern Run were already listed for pH (see A32R-03-PH and A32R-05-PH).

Additional monitoring was conducted during the 2016 cycle at 1ANOM012.38. The pH exceedance rate was acceptable 2/23 and Nomini Creek will be partially delisted.

Nontidal Nomini Creek Tributaries **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**16.36**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-07-DO** **Marshall Creek**

Location: Marshall Creek from its headwaters to its mouth at Templeman Run.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, Marshall Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at 1AMAR000.62, which is located at the Route 600 bridge.

Marshall Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.88**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-08-DO** **Barnes Creek**

Location: The nontidal portion of Barnes Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, Barnes Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/12 at 1ABAN001.34, which is located at Route 649.

Barnes Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.94**

Sources:

Dam or Impoundment	Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-08-PH** **Barnes Creek**

Location: The nontidal portion of Barnes Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2014 cycle, Barnes Creek was impaired of the Aquatic Life Use due to a pH exceedance rate of 5/12 at 1ABAN001.34, which is located at Route 649.

Barnes Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.94**

Sources:

Dam or Impoundment	Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-09-DO** **Mount Pleasant Creek**

Location: The nontidal portion of Mount Pleasant Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, Mount Pleasant Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 1AMBP001.00, which is located at Route 612.

Mount Pleasant Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.26**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A32R-09-PH** **Mount Pleasant Creek**

Location: The nontidal portion of Mount Pleasant Creek.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2014 cycle, Mount Pleasant Creek was impaired of the Aquatic Life Use due to a pH exceedance rate of 3/11 at 1AMBP001.00, which is located at Route 612.

Mount Pleasant Creek		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	pH - Total Impaired Size by Water Type:			**2.26**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A33E-04-BAC** **Lodge Creek**

Location: Lodge Creek from its tidal limit to the downstream extent of VDH-DSS condemnation 007-028F, 5/12/1997

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) /
VA Category: Enterococcus / 5A

Lodge Creek from its tidal limit downstream to the end of VDH-DSS condemnation 007-028F, 7/21/2004 has been assessed as not supporting the Recreation Use due to enterococci exceedances at 1ALOG001.20, which is located at the end of Route 712. The segment was expanded during the 2008 cycle to align the boundary with the 5/12/1997 impairment. During the 2016 cycle, the violation rate was 4/35.

The bacteria TMDL for shellfish impairments in the Yeocomico River watershed was approved by the EPA on 6/8/2006. Section 028F was addressed in the report. However, the Recreation Use impairment cannot be nested because the Callao WWTP was not addressed in the TMDL.

Lodge Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Enterococcus - Total Impaired Size by Water Type:	**0.301**		

Sources:

Non-Point Source Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A33L-01-DO** **Hampton Hall, Gardy Millpond**

Location: Hampton Hall, Gardy Millpond

City / County: Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2016 cycle an error was discovered from the 2014 cycle. The temperature impairment from 2014 cycle was actually a DO impairment. the violation rate for the DO impairment was 13/69 at station 1AHAM003.08. No new data has been collected since the 2014 cycle.

Hampton Hall, Gardy Millpond		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	Oxygen, Dissolved - Total Impaired Size by Water Type:		**45.86**	

Sources:

Natural Sources

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-02-BAC** **Lodge Creek**

Location: The free flowing portion of Lodge Creek.

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

During the 2014 cycle, Lodge Creek was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/21 at 1ALOG003.30, which is located at the Route 360 bridge. Monitoring at station 1ALOG003.45 was acceptable (0/3).

Lodge Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.44**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-02-DO** **Lodge Creek**

Location: The free flowing portion of Lodge Creek.

City / County: Northumberland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Lodge Creek was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 1ALOG003.30, which is located at the Route 360 bridge. The exceedance rate was 5/22 during the 2014 cycle. Monitoring at station 1ALOG003.45 was acceptable (0/3).

Lodge Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.44**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed	Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-03-DO** **Gardner Creek**

Location: The free flowing portion of Gardner Creek.

City / County: Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, Gardner Creek was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 1AGAD001.73, which is located at 3352 Coles Point Road. During the 2012 cycle, the violation rate was 4/11 at 1AGAD001.73.

Additional monitoring has been conducted in the 2016 cycle at 1AGAD002.54; the dissolved oxygen exceedance rate was 3/11.

Gardner Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.40**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-03-PH** **Gardner Creek**

Location: The free flowing portion of Gardner Creek.

City / County: Northumberland Co. Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2010 cycle, Gardner Creek was assessed as not supporting of the Aquatic Life Use due to a pH violation rate of 5/5 at 1AGAD001.73, which is located at 3352 Coles Point Road as well as a pH violation rate of 1/1 at 1AGAD002.54, which is located at the Route 612 bridge.

During the 2012 cycle, the violation rates increased to 11/11 and 7/7, respectively.

Additional monitoring has been conducted in the 2016 cycle at 1AGAD002.54; the pH exceedance rate was 11/11.

Gardner Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**1.40**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-04-DO** **XMB - Hampton Hall Creek, UT**

Location: Headwaters to the backwater of Gardys Millpond.

City / County: Northumberland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2014 cycle, UT XMB was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at 1AXMB000.88, which is located at Route 618.

XMB - Hampton Hall Creek, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**3.48**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-04-PH** **XMB - Hampton Hall Creek, UT**

Location: Headwaters to the backwater of Gardys Millpond.

City / County: Northumberland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2014 cycle, UT XMB was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 1AXMB000.88, which is located at Route 618.

XMB - Hampton Hall Creek, UT		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	pH - Total Impaired Size by Water Type:			**3.48**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-05-PH** **XLZ - Hampton Hall Creek, UT**

Location: Headwaters to the backwater of Gardys Millpond.

City / County: Westmoreland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

During the 2014 cycle, UT XLZ was impaired of the Aquatic Life Use due to a pH exceedance rate of 2/12 at 1AXLZ002.04, which is located at Route 601.

XLZ - Hampton Hall Creek, UT		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	pH - Total Impaired Size by Water Type:			**3.13**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A33R-07-BAC** **XMC - Lodge Creek, UT**

Location: Headwaters to mouth at Lodge Creek.

City / County: Northumberland Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

During the 2014 cycle, UT XMC was assessed as not supporting of the Recreation Use due to an E. coli exceedance rate of 3/12 at 1AXMC000.92, which is located at the Route 768 bridge.

XMC - Lodge Creek, UT	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**1.69**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* A34R-02-PH** **Little Wicomico River**

Location: The nontidal portion of Little Wicomico River.

City / County: Northumberland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

The nontidal portion of Little Wicomico River was initially considered not supporting the Aquatic Life Use during the 2006 cycle due to a pH exceedance rate of 2/11 at 1ALIS007.20, located at the Route 646 bridge. During the 2008 cycle, the exceedance rate increased to 3/13. No additional data has been collected.

Little Wicomico River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**2.33**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* A34R-03-DO** **XLL - Coan Mill Stream, UT**

Location: The unnamed tributary in its entirety.

City / County: Northumberland Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5C

During the 2010 cycle, the tributary was assessed as not supporting of the Aquatic Life Use due to dissolved oxygen violations at 1AXLL000.92, which is located west of Route 301. The exceedance rate was 2/12 during the 2012 cycle.

XLL - Coan Mill Stream, UT **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.10**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* B02R-01-BAC** **West Strait Creek**

Location: West Strait Creek from the headwaters downstream to the Monterey STP discharge. (Start Mile: 4.84 End Mile: 3.97 Total Impaired Size: .87 miles)

City / County: Highland Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station 1AWSC003.79 (3 violations of 9 samples for e-coli ion 2014, no new data in 2016). Initial Listing Date: 2010

West Strait Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.87**

Sources:

Agriculture	Non-Point Source	Unspecified Domestic Waste	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B02R-06-BAC** **Strait Creek**

Location: Strait Creek from the headwaters downstream to its confluence with West Strait Creek. (Start Mile: 6.06 End Mile: 3.29 Total Impaired Size: 2.77 Miles) This segment was shortened in 2016 with delist of downstream segments)

City / County: Highland Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the violations of the e-coli bacteria WQS at stations 1ASTT000.02 (1 violations of 12 samples for e-coli and 1ASTT004.26 (2 violations of 6 samples for e-coli in 2014 No new data in 2016). Initial Listing Date: 2006

Strait Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.77**

Sources:

Agriculture Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B03R-03-BAC** **South Fork South Branch Potomac River**

Location: South Fork South Branch Potomac River from the headwaters downstream to the VA/WVA State Line. (Start Mile: 2.71 End Mile: 0.00 Total Impaired Size: 2.71 Miles

City / County: Highland Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1ASFP002.56 (2 violations of 12 samples for e-coli). Initial Listing Date: 2012.

South Fork South Branch Potomac River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**2.71**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B04R-01-BAC** **Middle Fork Sleepy Creek**

Location: Middle Fork Sleepy Creek from the headwaters downstream to the VA/WVA state line. (Start Mile: 2.93 End Mile: 0.00 Total Impaired Size: 2.93 Miles)

City / County: Frederick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1AMIS000.33 (3 violations of 11 samples for e-coli). Initial Listing Date: 2014

Middle Fork Sleepy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.93**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B04R-02-BAC** **Sleepy Creek**

Location: Sleepy Creek from the headwaters downstream to the VA/WVA state line. (Start Mile: 7.72 End Mile: 0.00 Total Impaired Size: 7.72 Miles)

City / County: Frederick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1ASLP034.20 (2 violations of 12 samples for e-coli) Initial Listing Date: 2016.

Sleepy Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.72**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B05R-01-BAC** **Back Creek**

Location: Back Creek from the headwaters downstream to its confluence with Isaacs Creek. (Start Mile: 25.34 End Mile: 7.73 Total Impaired Size: 17.61 Miles)

City / County: Frederick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1ABAR041.11 (3 violations of 12 samples for e-coli). Initial Listing Date: 2010.

Back Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**17.61**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B05R-02-BAC** **Little Isaacs Creek**

Location: Little Isaacs Creek from the Timber Ridge School STP downstream (including an unnamed tributary originating near Reynolds Store) to its confluence with Isaacs Creek. (Start Mile: 9.93 End Mile: 0.00 Total Impaired Size: 9.93 Miles)

City / County: Frederick Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station 1ALIG001.84 (No new data in 2016, last data available was 2012). Initial Listing Date: 2008

Little Isaacs Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**9.93**

Sources:

Agriculture	Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B05R-03-BAC** **Isaacs Creek**

Location: Isaacs Creek from its confluence with Little Isaacs Creek downstream to its confluence with Back Creek. (Start Mile: 2.84 End Mile: 0.00 Total Impaired Size: 2.84 Miles)

City / County: Frederick Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station 1AISC001.77 (2 violations of 11 samples for e-coli) Initial Listing Date: 2016.

Isaacs Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**2.84**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B12R-01-PCB** **Lewis Creek**

Location: Lewis Creek south of the Staunton City boundary near the power line crossing downstream to its confluence with Middle River. (Start Mile: 10.06 End Mile: 0.00 Total Impaired Size: 10.06 Miles)

City / County: Augusta Co. Staunton City

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

This segment is impaired due to violations of Fish Tissue and Sediment screening values at stations: 1BLEW005.24 (01 Hg, HMW PAH, PHH, FTH, Pry, ATH Ben, Chrys, Chl 01 Fish PCB 2 sp 2005 Fish PCB) and 1BLEW006.64 (1 samples exceeded the PEC of 128 for Lead (172)) Data outside of data window, however, status carried forward. Initial Listing Date: 2004.

Lewis Creek **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**10.06**

Sources:

Inappropriate Waste Disposal	Municipal (Urbanized High Density Area)

Potomac and Shenandoah River Basins

***Cause Group Code:* B14R-03-TEMP** **Long Meadow Run**

Location: Long Meadow Run and tributary from the headwaters downstream to its confluence with Christians Creek. (Start Mile: 11.06 End Mile: 0.00 Total Impaired Size: 11.06 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5C

This segment is impaired due to violations of the natural trout temperature WQS (20 C) at station: 1BMDW000.18 (4 violations of 12 samples for temperature in 2012), no new data in 2016. Initial Listing Date: 2006. The aquatic life use is impaired due to violations of the temperature standard and is Category 5C due to suspected natural conditions.

Long Meadow Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**11.06**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* B16L-01-TEMP** **Elkhorn Lake**

Location: Elkhorn Lake (Total Impaired Size: 52.66 Acres)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Temperature, water / 5A

This lake is impaired due to violations of the temperature WQS at station: 1BNTH045.36 (37 violations of 139 samples for temperature). Initial Listing Date: 2010.

Elkhorn Lake **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:		**52.66**	

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* B16R-01-PH** **North River**

Location: North River from its confluence with Little River downstream to its confluence with Freemason Run. This impairment length was shortened in 2010 due to upstream stations returning to fully supporting status. Original length was 21.80 Miles. (Start Mile: 36.42 End Mile: 31.96 Total Impaired Size: 4.46 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment remains impaired due to violations of the pH WQS at station: 1BNTH036.96 (1 violations of 3 samples for pH 3 of 9 in 2010, no new data in 2016). Initial Listing Date: 2002

North River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.46**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-01-BEN** **Wolf Run**

Location: Wolf Run from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 3.31 End Mile: 0.00 Total Impaired Size: 3.31 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: USFS 2019 and USFS 2042. No new data available for the 2016 assessment window, this impairment carries over to this cycle. Initial Listing Date: 2002.

Wolf Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**3.29**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-01-PH** **Wolf Run**

Location: Wolf Run from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 3.31 End Mile: 0.00 Total Impaired Size: 3.31 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA VT56 (12 violations of 12 samples for pH in 2010, no new data available for 2016. Impairment carries forward.). Initial Listing Date: 2006.

Wolf Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.29**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-02-PH** **Briery Branch**

Location: Briery Branch from the headwaters downstream to its confluence with Hone Quarry Run. (Start Mile: 14.86 End Mile: 7.67 Total Impaired Size: 7.19 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5C

This segment remained impaired due to previous violations of the pH WQS at station: 1BBRY006.94. This assessment unit had 2 pH minimum standard violations out of 9 samples for the 2006 assessment window at station 1BBRY006.94. No additional data is available for the 2016 assessment cycle. In the 2002 assessment window, this segment was listed as impaired and carries forward to this cycle. The Category 5C - Impaired - No TMDL due to natural conditions carries from the 2006 assessment. Initial Listing Date: 2002.

Briery Branch	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**7.18**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-06-PH** **Rocky Run**

Location: Rocky Run from the headwaters downstream to its confluence with Briery Branch. (Start Mile: 1.94 End Mile: 0.00 Total Impaired Size: 1.94 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA RH33 (12 violations of 12 samples for pH in 2010, no new data for 2016, impairment carries forward). Initial Listing Date: 2006.

Rocky Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**1.93**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B18R-07-PH** **Union Springs Run**

Location: Union Springs Run from the headwaters downstream to its confluence with Red Banks Run. (Start Mile: 3.74 End Mile: 0.00 Total Impaired Size: 3.74 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA RH34 (12 violations of 12 samples for pH in 2010, no new data for 2016, impairment carries forward). Initial Listing Date: 2006.

Union Springs Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**3.73**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B20L-01-TEMP** **Switzer Lake**

Location: Switzer Lake (Total Impaired Size: 99.49 Acres)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Temperature, water / 5A

This lake is impaired due to violations of the temperature WQS at station: 1BSKD003.18 (50 violations of 335 samples for temperature). Initial Listing Date: 2006.

Switzer Lake **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:		**100.81**	

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* B20R-01-PH** **Dry River**

Location: Dry River from its confluence with Little Laurel Run downstream to its confluence with Blacks Run. (Start Mile: 20.83 End Mile: 10.65 Total Impaired Size: 10.18 Miles) This segment was shortened in 2014 due to a downstream assessment unit returning for fully supporting status.

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: 1BDUR017.26 (2 violations of 12 samples for pH). Initial Listing Date: 2002.

Dry River **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**10.18**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B30R-02-PH** **Loves Run**

Location: Loves Run from the headwaters downstream to its confluence with the South River. (Start Mile: 5.64 End Mile: 0.00 Total Impaired Size: 5.64 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA AU14 (12 violations of 12 samples for pH) This data is now outside the assessment data window, however the impairment must carry forward. Level II data at this site indicates continued impairment (1 violation of 1 sample for pH in 2016). Initial Listing Date: 2006.

Loves Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.63**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B30R-03-BEN** **Pine Run**

Location: Pine Run from the headwaters downstream to its confluence with the South River. (Start Mile: 20.38 End Mile: 0.00 Total Impaired Size: 20.38 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 1BPNE001.60 (Impaired for VSCI). Initial Listing Date: 2014

Pine Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**20.38**

Sources:

Agriculture	Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B31L-01-PH** **Coles Run Reservoir**

Location: Coles Run Reservoir (Total Impaired Size: 10.58 Acres)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This lake is impaired due to violations of the pH WQS at station: 1BCLS003.60 (88 violations of 88 samples for pH). Initial Listing Date: 2008.

Coles Run Reservoir		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	pH - Total Impaired Size by Water Type:		**10.84**	

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-01-BAC** **Back Creek**

Location: Back Creek from the headwaters (including South Fork Back Creek) downstream to the confluence with South River. (Start Mile: 12.87 End Mile 0.00 Total Impaired Size 12.87 Miles)

City / County: Augusta Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station 1BBCK000.78. (2 violations of 9 samples for e-coli). Initial Listing Date: 2012.

Back Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**12.85**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-01-BEN** **Back Creek**

Location: Back Creek from the headwaters (including South Fork Back Creek) downstream to the confluence with South River. (Start Mile: 12.87 End Mile 0.00 Total Impaired Size 12.87 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station 1BBCK000.78 (Impaired for VSCI). Initial Listing Date 2002.

Back Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**12.85**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-02-BEN** **Mills Creek**

Location: Mills Creek from the headwaters downstream to its confluence with Back Creek. (Start Mile: 9.14 End Mile: 0.00 Total Impaired Size: 9.14 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at USFS Station: 5116 (Impaired for VSCI) and 1BMLS002.37 (Impaired for VSCI). Initial Listing Date: 2002.

Mills Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.12**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-04-PH** **Coles Run**

Location: Coles Run from the headwaters downstream to its confluence with South River. (Start Mile: 6.89 End Mile: 0.00 Total Impaired Size: 6.89 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA AU16 (12 violations of 12 samples for pH in 2010, 1 violation of 1 samples in 2016 with Level II data indicate continued impairment, the impairment carries forward). Initial Listing Date: 2006.

Coles Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**6.88**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-05-PH** **Johns Run**

Location: Johns Run from the headwaters downstream its confluence with South River. (Start Mile: 5.46 End Mile: 0.00 Total Impaired Size: 5.46 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA AU15 (12 violations of 12 samples for pH in 2010, 1 violation of 1 samples in 2016 with Level II data indicate continued impairment, the impairment carries forward. Initial Listing Date: 2006.

Johns Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.45**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-06-PH** **Kennedy Creek**

Location: Kennedy Creek and tributaries from the headwaters downstream to its confluence with South River. (Start Mile: 15.48 End Mile: 0.00 Total Impaired Size: 15.48 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA VT39 (12 violations of 12 samples for pH in 2010, 14 violations of 14 samples in 2016 with Level II data indicate continued impairment, the impairment carries forward). Initial Listing Date: 2006.

Kennedy Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**15.47**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B31R-07-PH** **Orebank Creek**

Location: Orebank Creek from the headwaters downstream to its confluence with Back Creek. (Start Mile: 3.56 End Mile: 0.00 Total Impaired Size: 3.56 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA OB01 (12 violations of 12 samples for pH in 2010, no new data are available in 2014; AU35-UVA (1 violation of 1 sample Level II data indicate continued impairment, the impairment carries forward). Initial Listing Date: 2006.

Orebank Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.55**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-02-PCB** **South River**

Location: South River from its confluence with Stull Run downstream to its confluence with North River. (Start Mile: 5.38 End Mile: 0.00 Total Impaired Size: 5.38 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

This segment is impaired due to the presence of PCB's in fish tissue at station: 1BSTH000.19 (2 samples of PCB's (Carp and Redhorse Sucker (2005). Initial Listing Date: 2008.

South River **Fish Consumption**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
PCB in Fish Tissue - Total Impaired Size by Water Type:			**5.37**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-03-PH** **Paine Run**

Location: Paine Run from the headwaters downstream to its confluence with South River. (Start Mile: 6.75 End Mile: 0.00 Total Impaired Size: 6.75 Miles)

City / County: Augusta Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at stations: UVA PAIN (11 violations of 12 samples for pH) (This data is now outside the assessment data window, however 313 violations of 313 samples for pH in 2016 Level II data indicate continued impairment and the impairment carries forward to 2016). Initial Listing Date: 2004.

Paine Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**6.73**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B32R-04-PH** **Meadow Run**

Location: Meadow Run from the headwaters downstream its confluence with South River. (Start Mile: 8.82 End Mile: 0.00 Total Impaired Size: 8.82 Miles)

City / County: Augusta Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA VT36 (12 violations of 12 samples for pH in 2010 cycle, 15 violations of 15 samples in 2016 with Level II data indicates continues impairment, the impairment carries forward to 2016). Initial Listing Date: 2004.

Meadow Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**8.82**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B33R-02-PH** **Deep Run**

Location: Deep Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 4.49 End Mile: 0.00 Total Impaired Size: 4.49 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA DR01 (12 violations of 12 samples for pH) (This data is now outside the assessment data window, Level II data in 2016 are 102 violations of 102 samples indicating continued impairment and the impairment carries forward to 2016. Initial Listing Date: 2004.

Deep Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.49**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B33R-03-PH** **Lower Lewis Run**

Location: Lower Lewis Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 3.94 End Mile: 0.00 Total Impaired Size: 3.94 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA RH47 (12 violations of 12 samples for pH) (This data is now outside the assessment data window, Level II data in 2016 are 1 violation of 1 sample indicating continued impairment and the impairment carries forward to 2016. Initial Listing Date: 2006.

Lower Lewis Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**3.93**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-01-BAC** **Boone Run**

Location: Boone Run and tributaries from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 13.82 End Mile: 0.00 Total Impaired Size: 13.82 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment remains impaired for recreational use due to violations of the e-coli bacteria WQS at station: 1BBON000.60 (22 violations of 47 samples for e-coli) and 1BBON001.46 (10 violations of 23 samples for e-coli). Initial Listing Date: 2002.

Boone Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**13.81**

Boone Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**13.81**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-02-BAC** **Quail Run**

Location: Quail Run from the headwaters downstream to its confluence with Boone Run. (Start Mile: 6.60 End Mile: 0.00 Total Impaired Size: 6.60 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at stations: 1BQAL004.30 (4 violations of 12 samples for e-coli) and 1BQAL005.29 (12 violations of 59 samples for e-coli). Initial Listing Date: 2004 (lengthened 2010).

Quail Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.58**

Quail Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**5.12**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-03-BEN** **Quail Run**

Location: Quail Run from the headwaters downstream to the Massanutten STP discharge. (Start Mile: 6.60 End Mile: 5.14 Total Impaired Size: 1.46 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5C

This segment is impaired due to violations of the General Standard for Benthics at station: 1BQAL005.04 (Impaired for VSCI) and 1BQAL005.09 (Impaired for VSCI). Initial Listing Date: 2002.

Quail Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**1.46**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-04-PH** **Two Mile Run**

Location: Two Mile Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 5.06 End Mile: 0.00 Total Impaired Size: 5.06 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA VT53 (12 violations of 12 samples for pH) (This data is now outside the assessment data window, however 15 violations of 15 samples were observed with Level II data and indicate continued impairment and the impairment will carry forward to 2016). Initial Listing Date: 2006.

Two Mile Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**5.05**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B35R-05-PH** **One Mile Run**

Location: One Mile Run from the headwaters downstream to its confluence with the South Fork Shenandoah River (Start Mile: 9.17 End Mile: 0.00, Total Impaired Size: 9.17 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: UVA RH52 (6 violations of 6 samples for pH) This data is now outside the assessment window for 2016, however Level II data in 2016 of 1 violation of 1 sample indicate continued impairment and the impairment carries forward to 2016. Initial Listing Date: 2010

One Mile Run		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life				
	pH - Total Impaired Size by Water Type:			**9.16**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-01-PCB** **South Fork Shenandoah River**

Location: South Fork Shenandoah River from its confluence with Naked Creek downstream to its confluence with Stony Creek just above the Route 340 bridge at Alma. (Start Mile: 78.23 End Mile: 59.46 Total Impaired Size: 18.77)

City / County: Page Co. Rockingham Co.

Use(s): Fish Consumption

Cause(s) /
VA Category: PCB in Fish Tissue / 5A

This segment is impaired due to violations of the fish tissues screening value for PCB at stations: 1BSSF063.17 (2 samples of PCB in Lmouth Bass & Redbreast Sunfish) and 1BSSF078.24 (3 samples of PCB in White Sucker, Redbreast Sunfish & Smouth Bass). Initial Listing Date: 2010

South Fork Shenandoah River		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fish Consumption				
	PCB in Fish Tissue - Total Impaired Size by Water Type:			**19.12**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-02-BAC** **Line Run**

Location: Line Run from the headwaters downstream to its confluence with Honey Run. (Start Mile: 4.94 End Mile: 0.00 Total Impaired Size: 4.94 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BLIN001.60 (4 violations of 36 samples for e-coli in 2010, 2 of 33 in 2012, 1 of 24 in 2014, no data in 2016) Segment remains impaired in 2016. Initial Listing Date: 2006.

Line Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.93**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-03-BAC** **Honey Run**

Location: Honey Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 5.11 End Mile: 0.00 Total Impaired Size: 5.11 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BHDY000.91 (2 violations of 12 samples for e-coli). Initial Listing Date: 2008.

Honey Run		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation				
	Escherichia coli - Total Impaired Size by Water Type:			**5.10**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B37R-04-TEMP** **Cub Run**

Location: Cub Run in Page County from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 9.81 End Mile: 0.00 Total Impaired Size: 9.81 Miles)

City / County: Page Co. Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at station: 1BCUB-FP12-FOSR (10 violations of 98 samples for temperature). Initial Listing Date: 2012

Cub Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**9.79**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B38R-02-BAC** **Big Run**

Location: Big Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 6.41 End Mile: 0.00 Total Impaired Size: 6.41 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BBIG000.48 (21 violations of 23 samples for e-coli in 2014, no data in 2016). Initial Listing Date: 2006.

Big Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.40**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-03-BEN** **East Hawksbill Creek**

Location: East Hawksbill Creek from the headwaters downstream to its confluence with Hawksbill Creek. (Start Mile: 9.38 End Mile: 0.00 Total Impaired Size: 9.38 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BEHC001.18 (Impaired for VSCI). Initial Listing Date: 2008.

East Hawksbill Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.38**

Sources:

Agriculture Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-03-PH** **Rocky Branch**

Location: Rocky Branch from the headwaters downstream to its confluence with Pass Run . (Start Mile: 4.25 End Mile: 0.00 Total Impaired Size: 4.25 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: USGS 163054325. Initial Listing Date: 2004; This segment is impaired for aquatic life use based on violations of the pH WQS at USGS site 163054325. This use support carries forward for the 2006 assessment as no new data are available for assessment in 2016.

Rocky Branch **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**4.25**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-03-TEMP** **Pass Run**

Location: Pass Run from the headwaters downstream to its confluence with Hawksbill Creek. (Start Mile: 9.48 End Mile: 0.00 Total Impaired Size: 9.48 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at station: 1BPSS-FP17-FOSR (24 violations of 67 samples for temperature). Initial Listing Date: 2010

Pass Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**9.47**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* B39R-04-BEN** **Dry Run**

Location: Dry Run from the outfall of Lake Arrowhead downstream to its confluence with Hawksbill Creek. (Start Mile: 5.52 End Mile: 0.00 Total Impaired Size: 5.52 Miles)

City / County: Page Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BDRI000.21 (Impaired for VSCI). Initial Listing Date: 2012

Dry Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**5.52**

Sources:

Agriculture Dam or Impoundment Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-01-BAC** **Jeremys Run**

Location: Jeremys Run from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 11.70 End Mile: 0.00 Total Impaired Size: 11.70 Miles)

City / County: Page Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BJER000.62 (10 violations of 24 samples for e-coli). Initial Listing Date: 2012

Jeremys Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.69**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-02-BAC** **Flint Run**

Location: Flint Run and tributaries from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 12.59 End Mile: 0.00 Total Impaired Size: 12.59 Miles)

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment remains impaired due to violations of the e-coli WQS at station: 1BFNT002.16. (7 violations of 12 samples for e-coli). Initial Listing Date: 2004

Flint Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**12.58**

Flint Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**12.58**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-03-BAC** **Gooney Run**

Location: Gooney Run and tributaries from the headwaters downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 20.18 End Mile: 0.00 Total Impaired Size: 20.18 Miles)

City / County: Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BGNY000.04 (3 violations of 12 samples for e-coli). Initial Listing Date: 2010.

Gooney Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**20.17**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B40R-04-TEMP** **Flint Run**

Location: Flint Run from a point 4 miles upstream of its confluence with the South Fork Shenandoah River downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 4.10 End Mile: 0.00 Total Impaired Size: 4.10 Miles)

City / County: Warren Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS standard at station: 1BFNT-FW21-FOSR (9 violations of 38 samples for temperature in 2014, 2 of 16 samples in 2016, no new data). Initial Listing Date: 2010

Flint Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Temperature, water - Total Impaired Size by Water Type:			**4.10**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* B41R-04-BAC** **South Fork Shenandoah River**

Location: South Fork Shenandoah River from its confluence with Gooney Run downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 10.32 End Mile: 0.00 Total Impaired Size: 10.32 Miles) This segment was lengthened in 2012.

City / County: Warren Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BSSF000.19 (5 violations of 12 samples for e-coli); 1BSSF003.56 (9 violations of 46 samples for e-coli) and 1BSSF009.58 (2 violations of 13 samples for e-coli in 2014, no new data in 2016). Initial Listing Date: 2010

South Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.31**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B42R-01-BAC** **Crab Run**

Location: Crab Run from the VA/WVA line downstream to its confluence with the German River. (Start Mile: 3.93 End Mile: 0.00 Total Impaired Size: 3.93 Miles)

City / County: Rockingham Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BCRB000.18 (2 violations of 11 samples for e-coli). Initial Listing Date: 2010

Crab Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.93**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B42R-01-BEN** **North Fork Shenandoah River**

Location: North Fork Shenandoah River from its confluence with the German River downstream to its confluence with Capon Run (Start Mile: 107.67 End Mile: 105.08 Total Impaired Size: 2.59 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BNFS107.86 (Impaired for VSCI). Initial Listing Date: 2010

North Fork Shenandoah River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.59**

Sources:

Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-01-BEN** **Long Meadow Run**

Location: Long Meadow Run from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 9.85 End Mile: 0.00 Total Impaired Size: 9.85 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BLOM000.24 (Impaired for VSCI). Initial Listing Date 2008.

Long Meadow Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.85**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-02-BEN** **Turley Creek**

Location: Turley Creek from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 4.04 End Mile: 0.00 Total Impaired Size: 4.04 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BTRL000.02 (Impaired for VSCI). Initial Listing Date: 2002.

Turley Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.03**

Sources:

Source Unknown

Potomac and Shenandoah River Basins

***Cause Group Code:* B45R-05-BEN** **North Fork Shenandoah River**

Location: North Fork Shenandoah River from its confluence with Linville Creek downstream to its confluence with Holmans Creek. (Start Mile: 89.24 End Mile: 75.71 Total Impaired Size: 13.53 Miles).

City / County: Rockingham Co. Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BNFS087.35 (Impaired for VSCI) and 1BNFS088.81 (Impaired for VSCI (improving)). Initial Listing Date: 2008.

North Fork Shenandoah River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**13.52**

Sources:

- Industrial Point Source Discharge
- Municipal (Urbanized High Density Area)
- Non-Point Source

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-01-BEN** **Fridley Run**

Location: Fridley Run from the headwaters downstream to its confluence with Mountain Run. (Start Mile: 2.38 End Mile: 0.00 Total Impaired Size: 2.38 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: USFS 4074 (Slightly Impaired) Initial Listing Date: 2002.

Fridley Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**2.38**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-01-PH** **Fridley Run**

Location: Fridley Run from the headwaters downstream to its confluence with Mountain Run. (Start Mile: 2.38 End Mile: 0.00 Total Impaired Size: 2.38 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: 1BFDY000.02 (24 violations of 32 samples for pH) Initial Listing Date: 2006.

Fridley Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**2.38**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B47R-07-BEN** **Dry Fork**

Location: Dry Fork from the headwaters downstream to its confluence with Smith Creek. (Start Mile: 10.85 End Mile: 0.00 Total Impaired Size: 10.85 Miles)

City / County: Rockingham Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 1BDFK003.82 (Impaired for VSCI) and 1BDFK004.03 (Impaired for VSCI) in 2010 cycle, no new data in 2016. Initial Listing Date: 2006.

Dry Fork **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**10.85**

Sources:

Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B48R-02-BEN** **Crooked Run**

Location: Crooked Run from the headwaters downstream to its confluence with Mill Creek. (Start Mile: 4.08 End Mile: 0.00 Total Impaired Size: 4.08 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BCKD000.38 (Impaired for VSCI). Initial Listing Date: 2008.

Crooked Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**4.07**

Sources:

Agriculture Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-01-BEN** **Stony Creek**

Location: Stony Creek from its confluence with Yellow Spring Run downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 9.28 End Mile: 0.00 Total Impaired Size: 9.28 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BSTY004.24 (Impaired for VSCI) and 1BSTY005.91 (Impaired for VSCI). Initial Listing Date: 2008. This impairment was lengthened (added upstream segment) in 2016.

Stony Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**9.28**

Sources:

Agriculture	Municipal (Urbanized High Density Area)	Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-05-TEMP** **Little Stony Creek**

Location: Little Stony Creek and tributary from the headwaters of the tributary and the confluence of the tributary with Little Stony Creek near USFS Road 92 downstream to the confluence with Stony Creek. (Start Mile: 4.91 End Mile: 0.00 Total Impaired Size: 4.91 Miles.

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at station: 1BLSC000.50 (3 violations of 10 for temperature) Initial Listing Date: 2012.

Little Stony Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**4.91**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B49R-07-TEMP** **Stony Creek**

Location: Stony Creek from the Lake Laura dam outfall downstream to the Route 682 bridge (Wakeman's Grove Road). (Start Mile: 23.44 End Mile: 4.59 Total Impaired Size: 18.85 Miles) This impairments downstream extents was modified in 2012 and the impairment lengthened based on additional data.

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Temperature, water / 5A

This segment is impaired due to violations of the temperature WQS at station: 1BSTY013.85 (3 violations of 10 samples for temperature); 1BSTY-NS30-FOSR (15 violations of 116 samples for temperature); 1BSTY-NS58-FOSR (15 violations of 110 samples for temperature) and 1BSTY-NS29-FOSR (13 violations of 110 samples for temperature). Initial Listing Date: 2006.

Stony Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Temperature, water - Total Impaired Size by Water Type:			**18.84**

Sources:

Source Unknown

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-03-BAC** **Pughs Run**

Location: Pughs Run from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 7.00 End Mile: 0.00 Total Impaired Size: 7.00 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BPGH000.60 (4 violations of 10 samples for e-coli in 2012, no data in 2016, impairment carried forward). Initial Listing Date: 2004

Pughs Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**7.00**

Pughs Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**7.00**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B50R-03-BEN** **Pughs Run**

Location: Pughs Run from the headwaters downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 7.00 End Mile: 0.00 Total Impaired Size: 7.00 Miles)

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for benthics at station: 1BPGH000.29 (Impaired for VSCI). Initial Listing Date: 2012

Pughs Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**7.00**

Sources:

Agriculture	Non-Point Source

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B51R-01-BAC** **Tumbling Run**

Location: Tumbling Run from the headwaters downstream to the 5 mile upper limit of the PWS designation for the Strasburg Public Water Intake. (Start Mile: 5.20 End Mile: .95 Total Impaired Size: 4.25 Miles)

City / County: Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BTBL-NS44-FOSR (5 violations of 18 samples for e-coli). Initial Listing Date: 2004

Tumbling Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.24**

Tumbling Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**4.24**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B51R-02-BAC** **North Fork Shenandoah River**

Location: North Fork Shenandoah River from the 5 mile upper limit of the PWS designation for the Winchester Public Water intake downstream to its confluence with the South Fork Shenandoah River. (Start Mile: 11.72 End Mile: 0.00 Total Impaired Size: 11.72 Miles) This impairment was lengthened in 2010.

City / County: Shenandoah Co. Warren Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BNFS000.57 (4 violations of 36 samples for e-coli) and 1BNFS010.34 (12 violations of 60 samples for e-coli). Initial Listing Date: 2008.

North Fork Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.69**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-01-PH** **Cedar Creek**

Location: Cedar Creek from the headwaters downstream to the U.S. Forest Service boundary. (Start Mile: 40.57 End Mile: 32.28 Total Impaired Area: 8.29 Miles.

City / County: Shenandoah Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: 1BCDR045.30 (4 violations of 31 samples for e-coli. Initial Listing Date: 2014 (Upstream assessment unit added in 2016)

Cedar Creek **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
pH - Total Impaired Size by Water Type:			**8.27**

Sources:

Atmospheric Deposition - Acidity

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-04-BAC** **Cedar Creek**

Location: Cedar Creek from its confluence with a spring branch near Van Buren Furnace downstream to its confluence with Duck Run. (Start Mile: 37.11 End Mile: 20.29 Total Impaired Size: 16.82 Miles) This impairment was lengthened in 2014 adding two downstream segments.

City / County: Frederick Co. Shenandoah Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1BCDR023.47 (2 violations of 12 samples for e-coli); 1BCDR028.86 (2 violations of 12 samples for e-coli) 1BCDR-CC06-FOSR (9 violations of 17 samples for e-coli). Initial Listing Date: 2012.

Cedar Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**16.80**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-05-BAC** **Fall Run**

Location: Fall Run and its tributaries from the headwaters downstream to its confluence with Cedar Creek. (Start Mile: 15.17 End Mile: 0.00 Total Impaired Size: 15.17 Miles

City / County: Frederick Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1BFLR000.57 (2 violations of 12 samples for e-coli)
Initial Listing Date: 2014

Fall Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**15.17**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B52R-06-BAC** **Gravel Springs**

Location: Gravel Springs from the headwaters downstream to its confluence with Cedar Creek. (Start Mile: 3.29 End Mile: 0.00 Total Impaired Size: 3.29 Miles

City / County: Frederick Co. Shenandoah Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1BGSR000.40 (3 violations of 10 samples for e-coli) Initial Listing Date: 2016

Gravel Springs **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.29**

Sources:

Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B53R-01-BAC** **Cedar Creek**

Location: Cedar Creek from its confluence with Stickley Run downstream to its confluence with the North Fork Shenandoah River. (Start Mile: 3.75 End Mile: 0.00 Total Impaired Size: 3.75 Miles) This impairment was shortened in 2016 delisting two upstream segments.

City / County: Frederick Co. Shenandoah Co. Warren Co.

Use(s): Recreation

Cause(s) /
VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BCDR000.81 (2 violations of 12 samples for e-coli). Initial Listing Date: 2008. Upper segments de-listed and impairment shortened in 2016.

Cedar Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**3.75**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B54R-01-BAC** **Passage Creek**

Location: Passage Creek from its confluence with Peters Mill Run downstream to a point 4.6 miles upstream of the U.S. Forest Service boundary. (Start Mile: 19.08 End Mile: 8.66 Total Impaired Size: 10.42 Miles)

City / County: Shenandoah Co. Warren Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A Fecal Coliform / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at stations: 1BPSG018.13 (3 violations of 12 samples for e-coli). Initial Listing Date: 2006. Lower segments were de-listed in 2016 and impairment length shortened.

Passage Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**10.42**

Passage Creek **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**10.42**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Potomac and Shenandoah River Basins

***Cause Group Code:* B54R-01-PH** **Passage Creek**

Location: Passage Creek from the headwaters downstream to the Route 675 bridge crossing. (Start Mile: 37.38 End Mile: 31.93 Total Impaired Size: 5.45 Miles)

City / County: Page Co. Shenandoah Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: pH / 5A

This segment is impaired due to violations of the pH WQS at station: 1BPSG031.99 (2 violations of 5 samples for pH in 2010, no new data in 2016). Initial Listing Date: 2010

Passage Creek	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
pH - Total Impaired Size by Water Type:			**5.44**

Sources:

Atmospheric Deposition - Acidity

Potomac and Shenandoah River Basins

***Cause Group Code:* B56R-01-DO** **Crooked Run**

Location: Crooked Run from the Lake Frederick dam downstream to its confluence with the Nineveh Spring outfall. (Start Mile: 9.23 End Mile: 6.90 Total Impaired Size: 2.33 Miles) Impairment length shortened in 2016 with delist of downstream assessment unit.

City / County: Frederick Co. Warren Co.

Use(s): Aquatic Life

Cause(s) /
VA Category: Oxygen, Dissolved / 5A

This segment is impaired due to violations of the DO WQS at stations: 1BCRO-CR01-FOSR (2 violations of 13 samples for DO, no new data in 2014 or 2016, 1BCRO006.93 (4 violations of 10 samples for DO). Initial Listing Date: 2008.

Crooked Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**2.32**

Sources:

Upstream Impoundments
(e.g., PI-566 NRCS
Structures)

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B56R-02-BEN** **Stephens Run**

Location: Stephens Run from an unnamed tributary 1 mile upstream of Crooked Run downstream to its confluence with Crooked Run. (Start Mile: 1.00 End Mile: 0.00 Total Impaired Size: 1.00 Miles)

City / County: Frederick Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at station: 1BSTV000.20 (Impaired for VSCI). Initial Listing Date: 2016

Stephens Run	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life			
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**0.99**

Sources:

Non-Point Source

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-03-BAC** **Chapel Run**

Location: Chapel Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 11.75 End Mile: 0.00 Total Impaired Size: 11.75 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BCPL000.95 (3 violations of 24 samples for e-coli). Initial Listing Date: 2008.

Chapel Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**11.74**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-03-BEN** **Chapel Run**

Location: Chapel Run and tributaries from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 11.75 End Mile: 0.00 Total Impaired Size: 11.75 Miles)

City / County: Clarke Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic-Macroinvertebrate Bioassessments / 5A

This segment is impaired due to violations of the General Standard for Benthics at stations: 1BCPL000.95 (Impaired for VSCI). Initial Listing Date: 2006.

Chapel Run **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Benthic-Macroinvertebrate Bioassessments - Total Impaired Size by Water Type:			**11.74**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B57R-05-BAC** **Shenandoah River**

Location: Shenandoah River from its confluence with Long Branch downstream to its confluence with Spout Run. (Start Mile: 39.63 End Mile: 34.23 Total Impaired Size: 5.4 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1BSHN038.48 (4 violations of 12 samples for e-coli). Initial Listing Date: 2014

Shenandoah River **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**5.40**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-02-BAC** **Dog Run**

Location: Dog Run from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 6.13 End Mile: 0.00 Total Impaired Size: 6.13 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BDGR000.23 (5 violations of 12 samples for e-coli). Initial Listing Date: 2008.

Dog Run **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**6.13**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-03-BAC** **Wheat Spring Branch**

Location: Wheat Spring Branch from the headwaters downstream to its confluence with the Shenandoah River. (Start Mile: 4.69 End Mile: 0.00 Total Impaired Size: 4.69 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli bacteria WQS at station: 1BWSB000.22 (15 violations of 18 samples for e-coli). Initial Listing Date: 2008.

Wheat Spring Branch **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**4.69**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-04-BAC** **Long Marsh Run**

Location: Long Marsh Run from the headwaters downstream to the VA/WVA State Line. (Start Mile: 7.09 End Mile: 0.00 Total Impaired Size: 7.09 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1ALMR001.82 (6 violations of 12 samples for e-coli). Initial Listing Date: 2012.

Long Marsh Run		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation				
	Escherichia coli - Total Impaired Size by Water Type:			**7.09**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl

Fact Sheets for Impaired (Category 5) Waters in 2016

Potomac and Shenandoah River Basins

***Cause Group Code:* B58R-05-BAC** **Shenandoah River**

Location: Shenandoah River from its confluence with Craig Run downstream to the VA/WVA State Line. (Start Mile: 28.20 End Mile: 20.29 Total Impaired Size 7.91 Miles)

City / County: Clarke Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

This segment is impaired due to violations of the e-coli WQS at station: 1BSHN022.63 (5 violations of 36 samples for e-coli). Initial Listing Date: 2012.

Shenandoah River	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Recreation			
Escherichia coli - Total Impaired Size by Water Type:			**7.90**

Sources:

Agriculture	Non-Point Source	Wildlife Other than Waterfowl